

**REMARKS**

The claims have been amended based on the disclosure at, e.g., page 13, lines 1-6 of the specification.

Entry of the above amendment is respectfully requested.

**Information Disclosure Statement**

Applicants note that an Information Disclosure Statement is being submitted concurrently herewith. Applicants respectfully request that the Examiner consider the disclosed information and return an initialed copy of the PTO/SB/08 form with the next communication from the PTO.

**Priority**

On the Office Action Summary, the Examiner has neither acknowledged Applicants' claim for foreign priority nor indicated that copies of the certified copies of the priority documents have been received from the International Bureau.

Since priority was claimed when the application was filed, and since the Notice of Acceptance indicates that copies of the certified copies of the priority documents were received by the PTO (and copies of the certified copies of the priority documents are in the Image File Wrapper in the PAIR system on the PTO website), Applicants respectfully request that the Examiner acknowledge Applicants' claim for foreign priority and indicate that copies of the certified copies of the priority documents have been received from the International Bureau.

### **Obviousness Rejection**

On page 2 of the Office Action, in paragraph 2, claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. US 6,436,567.

In response, Applicants note initially that although Saito discloses "butadiene rubber" at col. 3, line 26, the attached entry from Grant & Hackh's Chemical Dictionary, 5<sup>th</sup> edition, shows that that such "butadiene rubber" would be considered to be cis-1,4-polybutadiene, not 1,2-polybutadiene. Also, the attached Illustrated Plastics Term Dictionary, published by Nikkan-Kogyo Shinbun Sha, defines "butadiene rubber" as being a rubbery material rich in the cis-1,4-bond among polybutadienes.

Further, Applicants note that page 12, lines 10-15 of the present specification states as follows:

For example, in the case of a homopolymer of butadiene, one mainly comprising monomer units having a 1,4-cis-linkage or 1,4-trans-linkage has a carbon-carbon double bond in main chain thereof, and it assumes a rubbery state at ordinary (or normal) temperature. This polymer is generally called "polybutadiene rubber."

This description suggests that so-called butadiene rubber is a 1,4-polybutadiene which has a carbon-carbon double bond in the main chain, but does not have a carbon-carbon double bond in the side chain, and assumes a rubbery state at normal temperature.

To the contrary, "a hydrocarbon compound (A) having a plurality of carbon-carbon double bonds" (which may be represented by 1,2-polybutadiene) contained in the curable composition in the amended claim 1 is a polymer wherein the ratio of the monomer unit having a side-chain containing a carbon-carbon double bond and saturated main chain is 60 mole % or more based on the total number of monomer units constituting the polymer. That is, in the polymer contained in the claimed curable composition, the main chain is saturated and has a

plurality of carbon-carbon double bonds in the side chain. This is contrary to the so-called butadiene rubber. The plurality of carbon-carbon double bonds in the side chain are crosslinked and cured to form a non-elastic cured product having a three-dimensional network structure.

In summary, Saito merely suggests thermoplastic elastomers, such as "butadiene rubber", and does not suggest a curable polymer contained in the claimed curable composition, such as 1,2-polybutadiene. Accordingly, Saito does not teach, suggest, or otherwise render obvious the claimed invention.

Moreover, Applicants submit that the present invention is also not obvious because it provides unexpectedly superior results, as can be seen from the unexecuted Declaration submitted herewith (the executed Declaration will be submitted promptly after it is received by the undersigned).

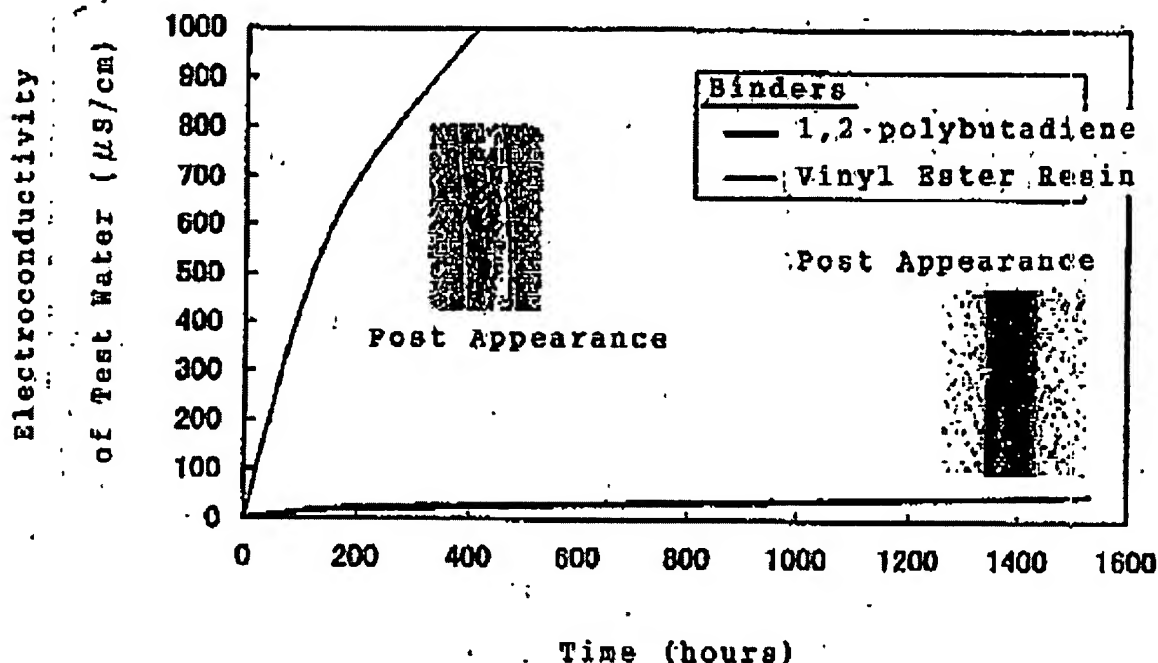
As set forth in the Declaration, the Declarant notes that what might be considered the closest specific embodiment disclosed in Saito involves the use of diallyl phthalate resin (see Example 11 in TABLE 2 of US 6,436,567 B1).

Since diallyl phthalate resin has an ester bond like vinyl ester resin has, it is considered that the hydrothermal (or hot water) resistance (antihydrolyzability) of the curable resin composition comprising diallyl phthalate resin is inferior to that of the curable resin composition comprising 1,2-polybutadiene as in the present invention from the following experimental data, which confirmed the surprising effects of the present invention in comparison with a composition in which vinyl ester resin is used.

In particular, the figure below shows comparative data between 1,2-polybutadiene, which is a diene compound of the present invention, and vinyl ester resin, which has an ester bond like diallyl phthalate resin has. From the test results, it is concluded that if 1,2-polybutadiene is used

In a curable composition, the curable composition can exert excellent hydrothermal (or hot water) resistance in comparison with the composition in which vinyl ester resin is used.

Hydrothermal (or Hot Water) Resistance of Carbon Resin  
Molded Separators at 150°C (Assessment of Test Water  
Electroconductivity)



The Declarant concludes that the vinyl ester resin was hydrolyzed by hot water and the resultant decomposed ions increased electroconductivity of the water, and thus the Declarant concludes that the present invention provides unexpectedly superior results.

Accordingly, Applicants submit that the present invention is not obvious, and withdrawal of this rejection is respectfully requested.

### Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


Respectfully submitted,

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**23373**

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